

Blue Green Algae



Guidance • Support • Prevention • Protection

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Environmental Health July 1, 2009



HEALTH ALERT

**Keep children and pets
away from
ALGAE**

Water may be green, blue, brown, red or appear cloudy. A thick foam or mat may be on the shoreline. Some algae may cause illness.

To report algae or for more information call

1-800-439-8550

or visit www.healthyvermonters.info

Blue Green Algae (BGA)

- “Cyanobacteria”
- Single cells, but when the cyanobacteria bloom, they can form a scum or a ‘bloom’ (pea-soup like)
- Grow in warm, still water
- May also appear red, purple or brown
- Appears like a paint-like sheen on water
- Warm water, phosphorus, nitrogen help bloom

Blue green algae is *not*:

- Long and stringy
- Rooted
- Attached to rocks
- Bright yellow (that's usually pine pollen)

Blue green algae toxins

- Toxins (microcystin and anatoxin) are made by *some* BGA cells
- Microcystin affects liver, anatoxin affects brain
- Toxins are released when cells die
- Waters immediately following the disappearance of a bloom might have a high toxin concentration

Exposure Routes



Ingestion (eating or drinking)



Dermal
(skin)

Inhalation
(breathing in)

Routes of Exposure

- Eating, dogs can lick fur, young children swallow water
- Skin exposure from swimming or bathing in water
- Breathing toxins during skiing or boating

BGA Toxin Ingestion Symptoms

- Symptoms may occur soon after exposure
- Nausea, vomiting, diarrhea, muscle fatigue
- Headache, abdominal pain
- Death (in rare instances)

BGA Toxin Dermal Symptoms

- Itchy eyes and skin
- Allergic like symptoms

Other animals affected by BGA toxins

- Ducks, geese, songbirds
- Fish, shellfish
- Livestock
- Pets

Where BGA blooms have been reported in Vermont

- Lake Champlain
- Lake Carmi
- Lake Memphremagog
- Shelburne Pond
- Lake St. Catherine
- Stoughton Pond

Discouraged Activities from Scummy Water

- No drinking (chlorine does not destroy toxins)
- No waterskiing
- No swimming
- No bathing
- No cooking (Boiling does not remove toxins)

DO Switch to a known safe source of water for drinking, cooking, tooth brushing.

What to Do If Exposed to BGA in a lake?

- Shower
- Wash clothes
- Seek medical attention, if needed

- Pets should be rinsed off and towel-dried to avoid licking any algae off the fur

What is VDH doing about BGA?

- VDH is working with UVM, Agency of Natural Resources to track blooms
- VDH issues public alerts, web site with map
- VDH Lab offers THOs water sampling kits for public water supplies and recreational water (microcystins and anatoxin)

Beach Closing/Re-Opening Guidance



Town Health Officer Role Regarding Blue Green Algae Occurrence

- Investigate complaints from citizens regarding algae at public swimming areas
- If you suspect a blue green algae bloom at a public beach, take water sample for toxins and send to Health Lab
- Post warning or closure signs, if warranted
- Report occurrences to Health Dept

Role of Health Officers cont.

- As the State and UVM collect samples themselves, they may call you to report blooms and or toxin presence and ask you to post a public swimming area.
- Once posted, you may reopen the area after the bloom has gone and your water samples are in acceptable limits

Close and post any *public* beach if any of the following condition are met:

- Visible known blue-green algae bloom/scum or an unknown, potentially blue-green algae (*i.e.*, **not** pollen), bloom/scum
- **Microcystin** concentration greater than or equal to 6 ug/L (ppb)
- **Anatoxin-a** concentration greater than or equal to 10 ug/L (ppb)

Reopen beach only if all 3 of these conditions are met:

- No visible blue-green algae bloom/scum
- Microcystin concentration is less than 6 ug/L (ppb)
- Anatoxin-a concentration is less than 10 ug/L (ppb)



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ATTENTION SWIMMING AREA CLOSED



as of _____

The _____ local health officer has determined that
swimming in this area presents a public health risk because of
water contaminated by _____.

It will be retested on _____ (date).

For more information contact:

Phone: _____

Signed: _____

Local Town Health Officer



If a town water supply may be impacted

- The water operator should call the Water Supply Division for assistance at
1-800-823-6500

For more information

- Laboratory test kits: (800) 660-9997
(Kit BGA-1 and Kit ANA)
- Lake Champlain Status Map and other health information:
http://healthvermont.gov/enviro/bg_algae/weekly_status.aspx (or www.healthvermont.gov
Contents A-Z; “B” for blue-green algae)
- Report blooms or additional health advice: 800-439-8550

An algae-free lake is a fun place to play

